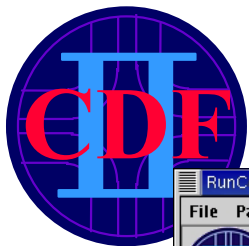




# Run Control

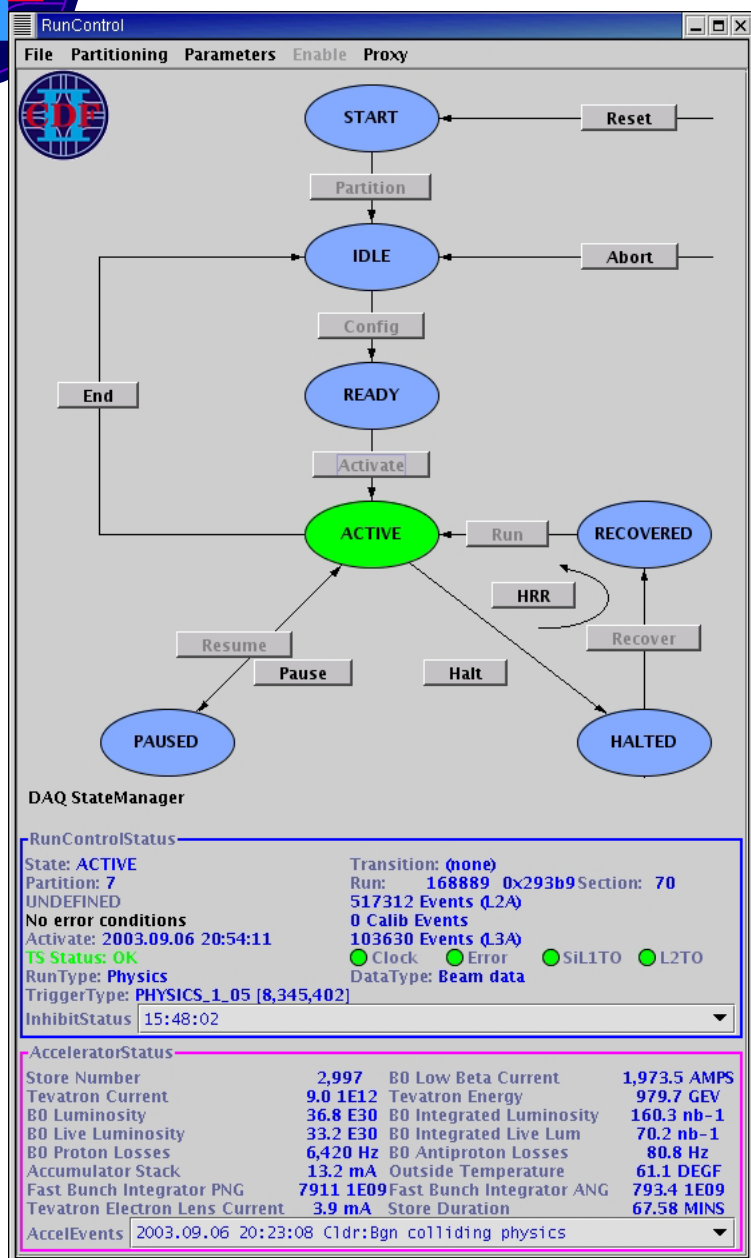
W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

How to start, configure  
and operate  
CDF Run Control



# Run Control, main window

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Run Control &  
Run Configuration  
26-Mar-2004



Main Run Control Window:  
Includes State Manager,  
Configuration pull-down menus, Run  
Control Status, and Accelerator  
Status panels

Start Run Control:  
**setup fer  
rc**  
(Aces use *cdfdaq* account)

*Just 3 steps to run!*

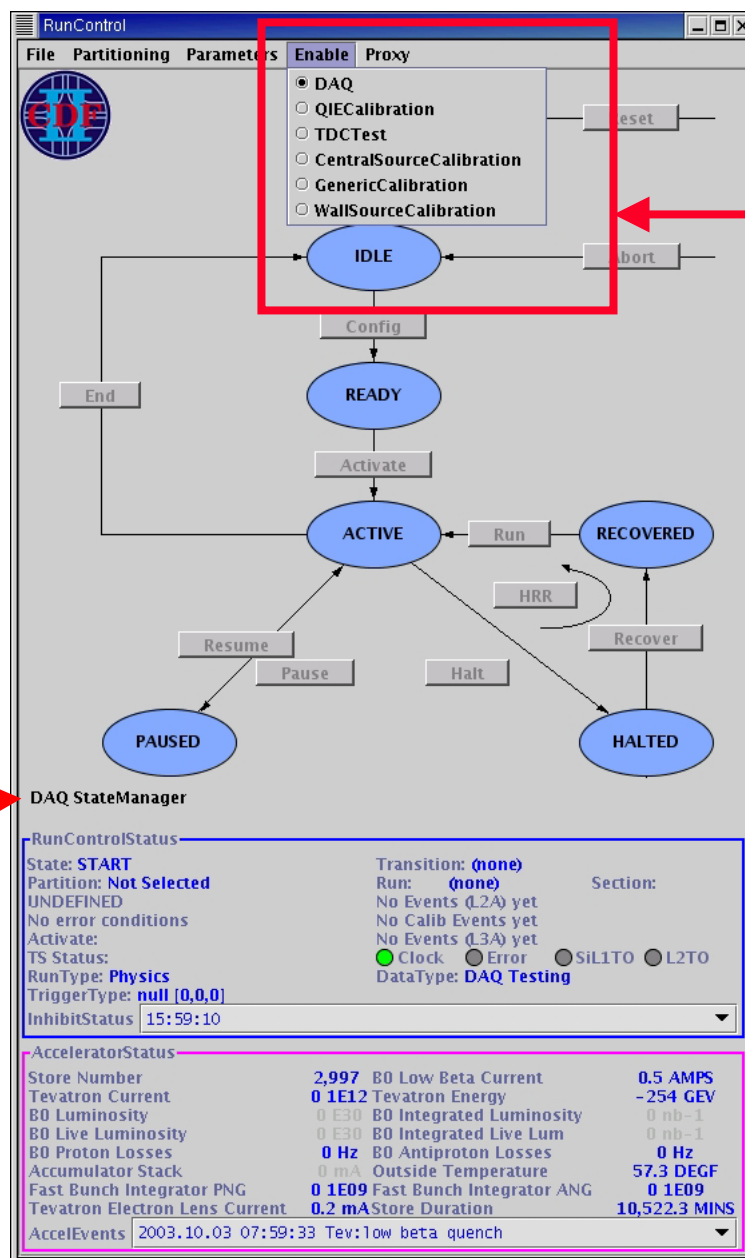
1. Select State Manager
  2. Select Partition
  3. Select Configuration
- Run!*



# State Manager Selection

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Run Control &  
Run Configuration  
26-Mar-2004

Step 1



## Select State Manager:

- Usually **DAQ**, default on startup
- **GenericCalibration** for calibrations unless specific menu item for given run type: e.g., **QIE Calibration**
- Source and TDC testing are primarily for experts

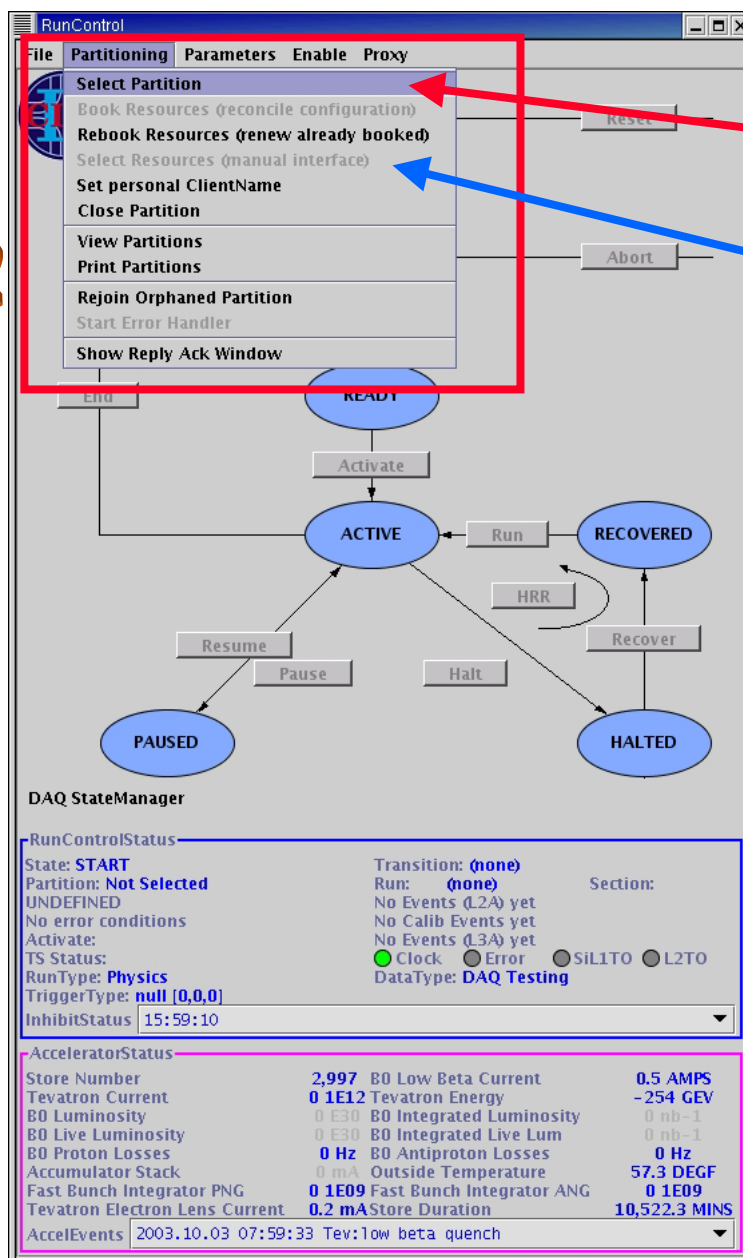
The State Manager determines the flow of control when cycling through runs



Step 2

# Select Partition

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Select partition

Select or view  
resources manually  
(via GUI)  
(enabled after partition selected)

Each Run Control Session must  
be allocate a Partition

Each front end crate belongs to  
no more than one Partition

*Partitions* allow resource locking  
and prevent collisions between  
sessions



# Partition Selector

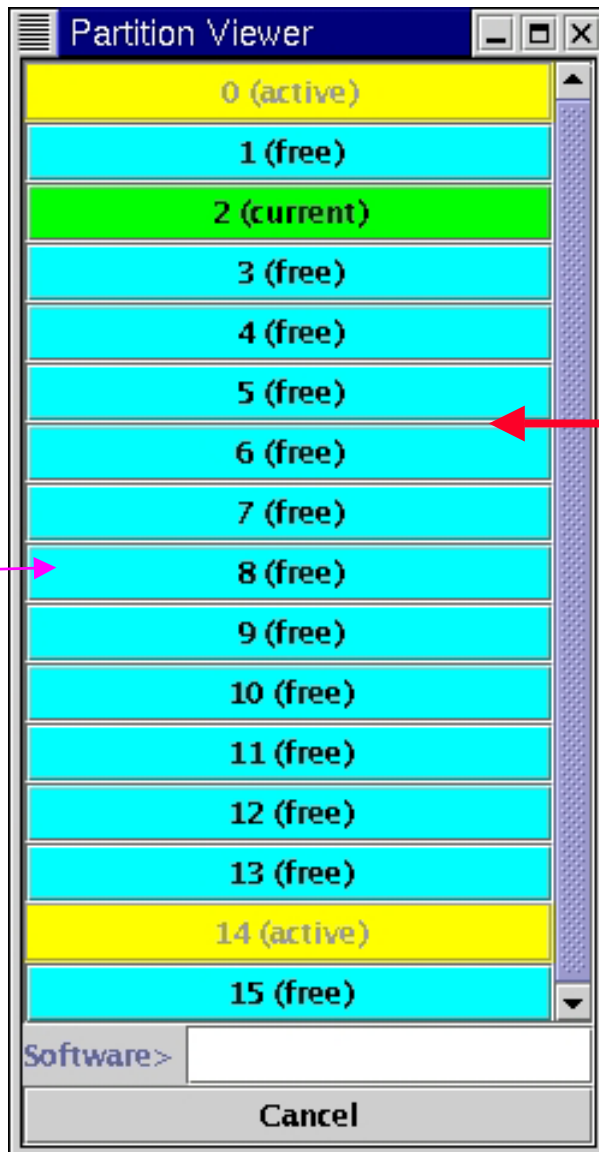
W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

Step 2a

## Select Partition:

- Cyan is free
- Yellow is owned by another
- Green is yours
- Mouse over to display owner and hardware/software status

- 0–7 hardware partitions
- 8 test stand partition
- 9–15 software partitions





# Resource Selector

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Run Control &  
Run Configuration  
26 Mar-2004

CDF Resource Selector Partition 4

File	Resources	Partition		
10	cdftaq	b0dap30.fnal.gov	2068	SuperAce x2080
Booked resource VRB				
Released resource VRB				
Booked resource MUTR				
Released resource MUTR				
Booked resource CLC				
Booked resource L2CL				
Active partitions:				
4	badgett	b0dap26.fnal.gov	25197	badgett
10	cdftaq	b0dap30.fnal.gov	2068	SuperAce x2080
Booked resource L2GL				

ResMgr>

CCAL	PCAL	WCAL	FCAL	COT
CALTDG	CMU	CMP	CMX	IMU
MUSC	CLC	SVX	XFT	SVT
MUTR	L1CL	L1GL	L2CL	L2GL
SCALERS	L1	L2	L3	PRESALE
VRB	INH	CALIB	TEST	

## Select Resources:

- Cyan is entirely free
- Red is entirely owned by another partition
- Blue is partially owned by another partition
- Yellow is partially yours
- Green is entirely yours
- Mouse over to display owner
- Click to book/unbook; Right-click for more info

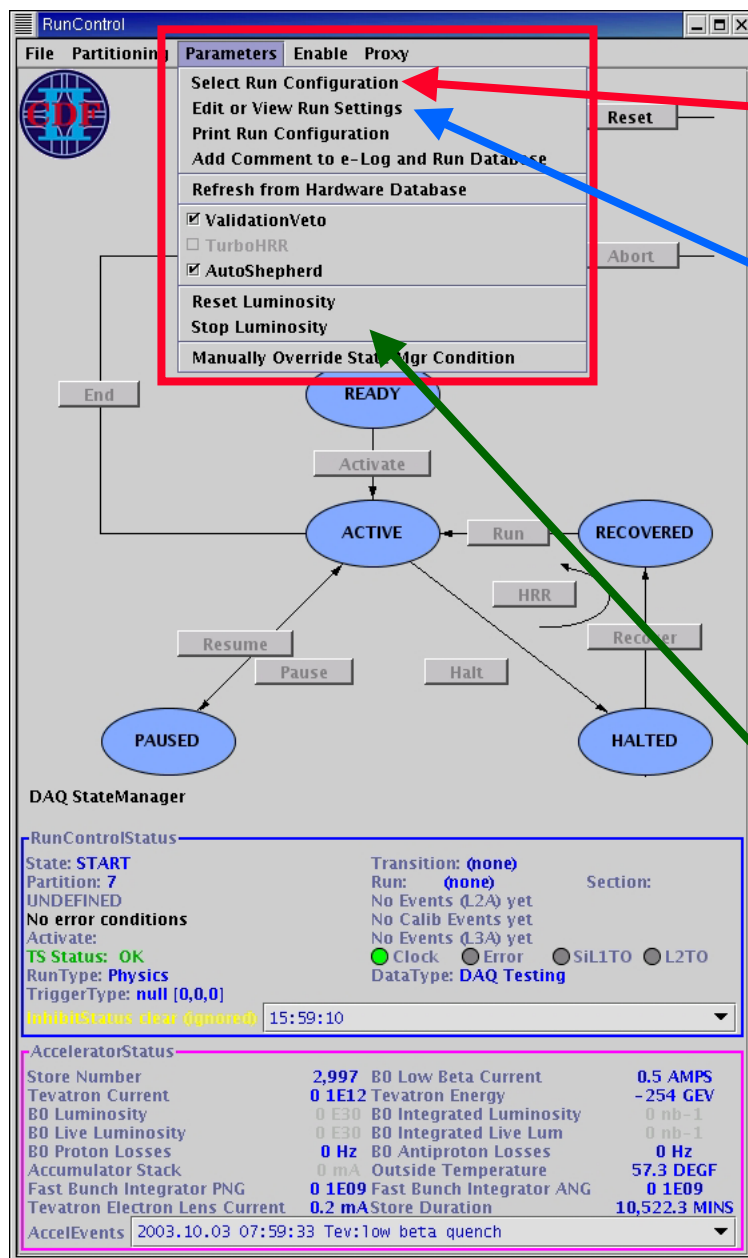


# Selecting Run Configuration

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

Step 3

After selecting a configuration, you're ready to start a run!



Select predefined run configuration

Edit or view run configuration



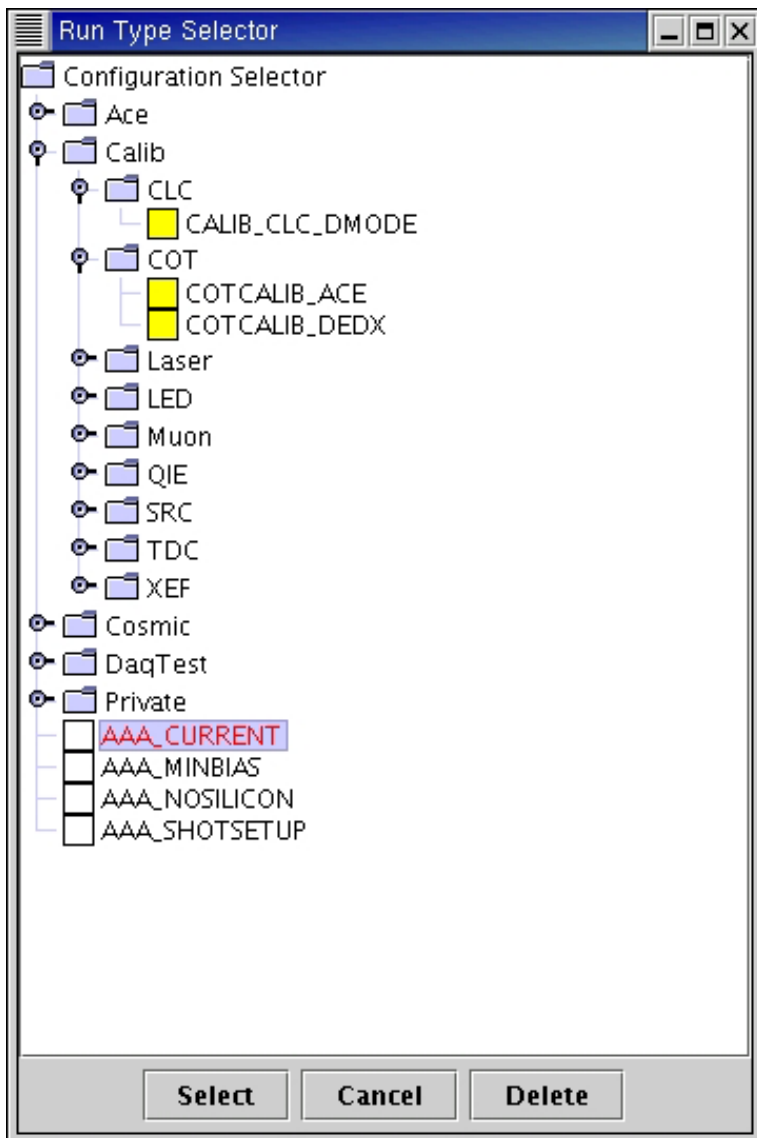
Frank sez:  
"This is the  
ace's most  
important duty!"

Reset or stop  
luminosity counters  
at beginning and end  
of stores -- *only if  
automatic reset fails!*



# Run Configuration Selector

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004



Select from predefined run configurations

- Ace directory contains all physics and test runs for the Ace, and is maintained by Ops Managers
- Cosmic directory for Cosmic Ray runs
- Calib directory contains calibration configurations, and is maintained by component experts in subdirectories
- Other directories for private testing purposes

*Or create your own configuration!*





# Run Settings Window, standard

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

Run Set: AAA\_CURRENT Owner: RUN\_USER

File Browse Create Triggers Data Type LookArea TapeOption Inhibits CalibrationJobSet

Expert:

<input checked="" type="checkbox"/> UseFred	<input checked="" type="checkbox"/> UseSrc	<input checked="" type="checkbox"/> UseScaler	<input checked="" type="checkbox"/> UseTM	<input checked="" type="checkbox"/> UseLevel3Manager	<input checked="" type="checkbox"/> UseErrorHar
<input checked="" type="checkbox"/> UseSlowControl	<input type="checkbox"/> MyronMode	<input type="checkbox"/> L1Early	<input type="checkbox"/> IgnoreError	<input type="checkbox"/> IgnoreBusy	<input type="checkbox"/> EnableFP
<input type="checkbox"/> DisableCrates	<input type="checkbox"/> DisableL1Calib	<input type="checkbox"/> StartOnB0	<input type="checkbox"/> Sv396Mode	<input type="checkbox"/> IgnoreBC	<input checked="" type="checkbox"/> DacFromHdd
<input checked="" type="checkbox"/> LoadDacs	<input type="checkbox"/> LoadQJEFram	<input type="checkbox"/> LoadEtAlgo	<input type="checkbox"/> LoadEtTable		

RunType: **Physics** TriggerType: PHYSICS\_1.05 [3,298,382]

SvxSet: SVX\_NO\_PEDS CalorCalibSet: (none)

Output: ☐ Ethernet(SoftEvb) ☒ VRB(HardEvb) ☒ RunNumber ☒ DiagnosticBank ☐ ExtraDBanks ☐ ReadoutLists

L1 Mode: ☒ Standard (Fred) ☐ Calib Fixed Period ☐ Calib External Trig ☐ Calib SVX ☐ Calib Continuous ☐ Software

L2 Mode: ☐ Auto L2 Accept ☐ Auto L2 ALT ☐ Auto L2 Reject ☒ L2 Processors

L3 SubFarms: ☐ All ☐ None

Output	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Parameter	Value
Directory	
Status	16777215
NEvents	0
RunSectionInterval	50
Iteration	0
PauseInterval	0
TsCode	0
CalibPipe	0
CalibInterval	3

Consumers

<Chosen> All Choices>

Edit

<< Add <<

>> Remove >>

BEAMMON

CLCCALIB

CLCCALIB\_ROOT

L3REGIONALMON

LUMMON

OBJECTM

SILIMON

STAGE0

SVXMON

TRIMON

Crates

<Chosen> All Choices>

Edit

<< Add <<

>> Remove >>

☐ CAL\_PULSER\_01

☐ LEVEL2\_DECISION\_01

☐ PCAL\_SOURCE\_00

☐ TEST\_CAL\_01

☐ TEST\_CAL\_02

☐ TEST\_CES\_00

☐ TEST\_COT\_01

☐ TEST\_LEVEL2\_01

☐ TEST\_LEVEL2\_02

☐ TEST\_MUCH\_01

0 CCAL\_00

0 CCAL\_01

0 CCAL\_02

0 CCAL\_03

0 CCAL\_04

0 CCAL\_05

0 CCAL\_06

0 CCAL\_07

0 CCAL\_08

0 CCAL\_09

Aces should know all options on this window

Global DAQ RunType

Trigger Table, coupled

CalorCalibSet, when Plug source, LED, Xenon run types

SVX Set, when SVX is used Usually FIBTEST

Consumer Selection (calibration run types only for now)

Front end crate selection Move to left to include or right to exclude



# Run Settings, Expert Options

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

Run Set: AAA\_CURRENT Owner: RUN\_USER

File Browse Create Triggers Data Type LookArea TapeOption Inhibits CalibrationJobSet

Expert:

<input checked="" type="checkbox"/> UseFred	<input checked="" type="checkbox"/> UseSrc	<input checked="" type="checkbox"/> UseScaler	<input checked="" type="checkbox"/> UseTM	<input checked="" type="checkbox"/> UseLevel3Manager	<input checked="" type="checkbox"/> UseErrorHandler
<input checked="" type="checkbox"/> UseSlowControl	<input type="checkbox"/> MyronMode	<input type="checkbox"/> L1Early	<input type="checkbox"/> IgnoreError	<input type="checkbox"/> IgnoreBusy	<input type="checkbox"/> EnableFP
<input type="checkbox"/> DisableCrates	<input type="checkbox"/> DisableL1Calib	<input type="checkbox"/> StartOnB0	<input type="checkbox"/> SvX396Mode	<input type="checkbox"/> IgnoreBC	<input checked="" type="checkbox"/> DacFromHdb
<input checked="" type="checkbox"/> LoadDacs	<input type="checkbox"/> LoadQJEFRAM	<input type="checkbox"/> LoadEtAlgo	<input type="checkbox"/> LoadEtTable		

RunType: Physics TriggerType: PHYSICS\_1\_05 [3,298,382]

SvxSet: SVX\_NO\_PEDS CalorCalibSet: (none)

Output: ☐ Ethernet(SoftEvb) ☒ VRB(HardEvb) ☒ RunNumber ☒ DiagnosticBank ☐ ExtraDBanks ☒ ReadoutLists

L1 Mode: ☒ Standard (Fred) ☐ Calib Fixed Period ☐ Calib External Trig ☐ Calib SvX ☐ Calib Continuous ☐ Software

L2 Mode: ☐ Auto L2 Accept ☐ Auto L2 ALT ☐ Auto L2 Reject ☒ L2 Processors

L3 SubFarms: ☐ All ☐ None

Output 1	Output 2	Output 3	Output 4	Output 5	Output 6	Output 7	Output 8
<input checked="" type="checkbox"/> 1 <input checked="" type="checkbox"/> 2	<input checked="" type="checkbox"/> 3 <input checked="" type="checkbox"/> 4	<input checked="" type="checkbox"/> 5 <input checked="" type="checkbox"/> 6	<input checked="" type="checkbox"/> 7 <input checked="" type="checkbox"/> 8	<input checked="" type="checkbox"/> 9 <input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 11 <input checked="" type="checkbox"/> 12	<input checked="" type="checkbox"/> 13 <input checked="" type="checkbox"/> 14	<input checked="" type="checkbox"/> 15

Parameter	Value
Directory	
Status	16777215
NEvents	0
RunSectionInterval	50
Iteration	0
PauseInterval	0
TsCode	0
Calib Pipe	0
Calib Interval	3

Consumers

<Chosen All Choices>

Edit

<< Add <<

>> Remove >>

Crates

<Chosen All Choices>

Edit

<< Add <<

>> Remove >>

BEAMMON  
CLCCALIB  
CLCCALIB\_ROOT  
L3REGIONALMON  
LUMMON  
OBJECTMON  
SILIMON  
STAGE0  
SVXMON  
TRIMON  
CAL\_PULSER\_01  
LEVEL2\_DECISION\_01  
PCAL\_SOURCE\_00  
TEST\_CAL\_01  
TEST\_CAL\_02  
TEST\_CES\_00  
TEST\_COT\_01  
TEST\_LEVEL2\_01  
TEST\_LEVEL2\_02  
TEST\_MUON\_01

Expert options can be enabled from the *File* pull-down menu

Many expert options are triggered by the selection of other options or the addition of crates

You may be asked to take special runs, e.g. **MyronMode** with **L1Early**, or without **ReadoutLists**, which are only available in the expert options



# Trigger Inhibits

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

Inhibits normally used only during physics (colliding beam) runs, otherwise set IgnoreInhibit to true

Inhibit sources are tied to the crates and components you have chosen, and are selected automatically

Inhibits cause data taking to stop: watch event rates, RunControl display and main InhibitDisplay

In an emergency, you may have to disable misbehaving inhibit signals from the main InhibitDisplay GUI **before the run is activated**

To control and use the inhibit system, you must have the INHIBIT\_00 (b0inh00) crate in your



# Trigger Inhibit on RunControl

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

**RunControlStatus**  
State: ACTIVE  
Partition: 0  
UNDEFINED  
No error conditions  
Activate: 2003.09.06 20:54:11  
TS Status: OK  
RunType: Physics  
TriggerType: PHYSICS\_1\_05 [8,345,402]  
InhibitStatus: SET 17:51:46 TRIP:SVX00 TRIP:SVX01

Transition: (none)  
Run: 168889 0x293b9 Section: 70  
517312 Events (L2A)  
0 Calib Events  
103630 Events (L3A)  
Clock Error SiL1TO L2TO  
DataType: Beam data

**AcceleratorStatus**  
Store Number 2,997 B0 Low Beta Current 1,973.5 Amps  
Tevatron Current 9.0 1E12 Tevatron Energy 979.7 GEV  
B0 Luminosity 36.8 E30 B0 Integrated Luminosity 168.3 nb-1  
B0 Live Luminosity 33.2 E30 B0 Integrated Live Lum 70.2 nb-1  
B0 Proton Losses 6,420 Hz B0 Antiproton Losses 80.8 Hz  
Accumulator Stack 13.2 mA Outside Temperature 61.1 DegF  
Fast Bunch Integrator PNG 7911 1E09 Fast Bunch Integrator ANG 793.4 1E09  
Tevatron Electron Lens Current 3.9 mA Store Duration 67.58 MINS  
AccelEvents 2003.09.06 20:23:08 Cldr:Bgn colliding physics

In this case, the Inhibit is **SET**, indicating data taking has stopped

Click on the pop-up to get a history of trips

The guilty components here are TRIP:SVX00 and TRIP:SVX01

RunControl crate: **INHIBITS\_00** *b0inh00*

*Jonatron sez:*  
“Selecting the Inhibitions is the Ace’s most important duty!”



This is the *new* Inhibit system  
from  
...December 2003...







# Data Type Selection

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

Run Set: AAA\_CURRENT Owner: RUN\_USER

File Browse Create Triggers Data Type LookArea TapeOption Inhibits CalibrationJobSet

Expert: ☒ UseFred ☒ UseSlowC ☐ DisableC ☒ LoadDacs

RunType: Physics ☐ UseScaler ☒ UseTM ☒ UseLevel3Manager ☒ UseErrorH

SvxSet: SVX\_NO\_PEDS L1Early ☐ IgnoreError ☐ IgnoreBusy ☐ EnableFP

Output: ☐ Ethernet(SoftEvb) ☒ VRB(HardEvb) ☒ RunNumber ☒ DiagnosticBank ☐ ExtraDBanks ☒ ReadoutLists

L1 Mode: ☒ Standard (Fred) ☐ Calib Fixed Period ☐ Calib External Trig ☐ Calib SVX ☐ Calib Continuous ☐ Software

L2 Mode: ☐ Auto L2 Accept ☐ Auto L2 ALT ☐ Auto L2 Reject ☒ L2 Processors

L3 SubFarms: ☐ All ☐ None

Output 1: ☒ 1 ☒ 2 Output 2: ☒ 3 ☒ 4 Output 3: ☒ 5 ☒ 6 Output 4: ☒ 7 ☒ 8 Output 5: ☒ 9 ☒ 10 Output 6: ☒ 11 ☒ 12 Output 7: ☒ 13 ☒ 14

Parameter Value

Directory	
Status	16777215
NEvents	0
RunSectionInterval	50
Iteration	0
PauseInterval	0
TsCode	0
CalibPipe	0
CalibInterval	3

Consumers

<Chosen All Choices>

Edit

<< Add <<

>> Remove >>

Crates

<Chosen All Choices>

Edit

<< Add <<

>> Remove >>

CCAL\_00 CCAL\_01 CCAL\_02 CCAL\_03 CCAL\_04 CCAL\_05 CCAL\_06 CCAL\_07 CCAL\_08

BEAMMON CLCCALIB CLCCALIB\_ROOT L3REGIONALMON LUMMON OBJECTMON SILIMON STAGE0 SVXMON TRIMON

CAL\_PULSER\_01 LEVEL2\_DECISION\_01 PCAL\_SOURCE\_00 TEST\_CAL\_01 TEST\_CAL\_02 TEST\_CES\_00 TEST\_COT\_01 TEST\_LEVEL2\_01 TEST\_LEVEL2\_02 TEST\_MUCH\_01

Pull-down menu in Run Settings window selects data types

Select *Beam Data* only when colliding beams are in the Tevatron

Use DAQ Testing when just exercising the system

Tony sez:  
“Selecting the Data Type is the Ace’s most important Duty”





# Data Storage Control

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

Run Set: AAA\_CURRENT Owner: RUN\_USER

File Browse Create Triggers Data Type LookArea TapeOption Inhibits CalibrationJobSet

Expert: ☒ UseFred ☒ UseSrc ☐ MyronMod ☐ IgnoreError ☐ IgnoreBusy ☐ EnableFP ☐ UseLevel3Manager ☒ UseErrorHandler

☒ UseSlowControl ☐ DisableCrates ☐ DisableL1Calib ☐ StartOnB0 ☐ SvX396Mode ☐ IgnoreBC ☒ DacFromHdb

☒ LoadDacs ☐ LoadQJEFram ☐ LoadEtAlgo ☐ LoadEtTable

RunType: Physics TriggerType: PHYSICS\_1\_05 [3,298,382]

SvXSet: SVX\_NO\_PEDS CalorCalibSet: (none)

Output: ☐ Ethernet(SoftEvb) ☒ VRB(HardEvb) ☒ RunNumber ☒ DiagnosticBank ☐ ExtraDBanks ☒ ReadoutLists

L1 Mode: ☒ Standard (Fred) ☐ Calib Fixed Period ☐ Calib External Trig ☐ Calib SvX ☐ Calib Continuous ☐ Software

L2 Mode: ☐ Auto L2 Accept ☐ Auto L2 ALT ☐ Auto L2 Reject ☒ L2 Processors

L3 SubFarms: ☐ All ☐ None

Output 1: ☒ 1 ☒ 2 Output 2: ☒ 3 ☒ 4 Output 3: ☒ 5 ☒ 6 Output 4: ☒ 7 ☒ 8 Output 5: ☒ 9 ☒ 10 Output 6: ☒ 11 ☒ 12 Output 7: ☒ 13 ☒ 14 Output 8: ☒ 15 ☒ 16

Parameter	Value
Directory	
Status	16777215
NEvents	0
RunSectionInterval	50
Iteration	0
PauseInterval	0
TsCode	0
CalibPipe	0
CalibInterval	3

Consumers

<Chosen All Choices>

Edit

<< Add <<

>> Remove >>

Crates

<Chosen

CCAL\_00 CCAL\_01 CCAL\_02 CCAL\_03 CCAL\_04 CCAL\_05 CCAL\_06 CCAL\_07 CCAL\_08

BEAMMON CLCCALIB CLCCALIB\_ROOT L3REGIONALMON LUMMON OBJECTMON SILIMON STAGE0 SVXMON TRIMON CAL\_PULSER\_01 LEVEL2\_DECISION\_01

## TapeOption:

- How much data goes to tape
- Normally **Default**
- Except special runs request

## LookArea:

- How much data goes to disk
- Normally **Default**
- Special runs may have different setting

You have two ways to control the final storage disposition of the data, via *disk* or *tape*  
Use non-defaults only on expert request



# Trigger Type Selection

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

Select *coupled*  
Trigger Table here  
for normal physics  
running

Select decoupled  
tables here for  
testing, cosmics,  
minbias, l2torture

Coupled tables  
are fully  
specified from  
Level 1, Level 2  
through Level 3

**Synonyms:**  
TriggerType =  
TriggerTable =  
PhysicsTable

16

Run Set: AAA\_CURRENT Owner: RUN\_USER

File Browse Create Triggers Data Type LookArea TapeOption Inhibits CalibrationJobSet

Expert: ☒ List L2 Tag Sets ☒ List L3 Tag Sets ☒ Level 1,2 Special Trigger Types (decoupled from L3)

☐ DisableCrates ☐ DisableL1Calib ☐ StartOnB0 ☐ Svx396Mode ☐ LoadEtTable

☒ LoadDacs ☐ LoadQJEFram ☐ LoadEtAlgo

RunType: Physics TriggerType: PHYSICS\_1\_05 [3,298,382]

SvxSet: SVX\_NO\_PEDS CalorCalibSet: (none)

Output: ☐ Ethernet(SoftEvb) ☒ VRB(HardEvb) ☒ RunNumber ☒ DiagnosticBank ☐ ExtraDBanks ☒ ReadoutLists

L1 Mode: ☒ Standard (Fred) ☐ Calib Fixed Period ☐ Calib External Trig ☐ Calib SVX ☐ Calib Continuous ☐ Software

L2 Mode: ☐ Auto L2 Accept ☐ Auto L2 ALT ☐ Auto L2 Reject ☒ L2 Processors

L3 SubFarms: ☐ All ☐ None

Output 1: ☒ 1 ☒ 2 Output 2: ☒ 3 ☒ 4 Output 3: ☒ 5 ☒ 6 Output 4: ☒ 7 ☒ 8 Output 5: ☒ 9 ☒ 10 Output 6: ☒ 11 ☒ 12 Output 7: ☒ 13 ☒ 14 Output 8: ☒ 15 ☒ 16

Parameter	Value
Directory	
Status	16777215
NEvents	0
RunSectionInterval	50
Iteration	0
PauseInterval	0
TsCode	0
CalibPipe	0
CalibInterval	3

Consumers

<Chosen All Choices>

Edit

<< Add <<

>> Remove >>

Crates

<Chosen All Choices>

Edit

<< Add <<

>> Remove >>

CCAL\_00 CCAL\_01 CCAL\_02 CCAL\_03 CCAL\_04 CCAL\_05 CCAL\_06 CCAL\_07 CCAL\_08

BEAMMON CLCCALIB CLCCALIB\_ROOT L3REGIONALMON LUMMON OBJECTMON SILIMON STAGE0 SVXMON

CAL\_PULSER\_01 LEVEL2\_DECISION\_01 PCAL\_SOURCE\_00 TEST\_CAL\_01 TEST\_CAL\_02 TEST\_CES\_00 TEST\_COT\_01 TEST\_LEVEL2\_01 TEST\_LEVEL2\_02

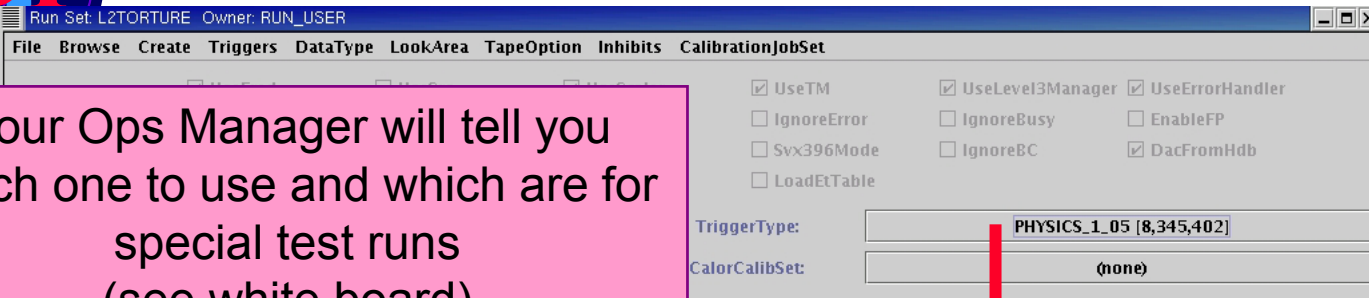




# Coupled Trigger Tables

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

Your Ops Manager will tell you  
which one to use and which are for  
special test runs  
(see white board)



Trigger Type Selector

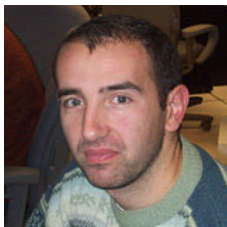
Select a single row of parameters from the list of choices below

PHYSICSTABLE	TAG	L2	L3	DESCRIPTION	CREATED
PHYSICS_1_05	8	345	402	PHYSICS_1_05 v8	2003.08.26
PHYSICS_1_05	8	344	402	PHYSICS_1_05 v8	2003.08.26
PHYSICS_1_05	8	343	402	PHYSICS_1_05 v8	2003.08.26
PHYSICS_1_05	8	342	402	PHYSICS_1_05 v8	2003.08.26
PHYSICS_1_05	8	341	402	PHYSICS_1_05 v8	2003.08.26
	10	402		PHYSICS_1_05 v8	2003.08.26
	7	402		PHYSICS_1_05 v8	2003.08.26
	4	400		RAW tracking banks dropped	2003.08.18
	3	400		RAW tracking banks dropped	2003.08.18
	3	394		PHYSICS_1_05 v6	2003.07.25
PHYSICS_TEST_1_05	26	335	401	Several new trigger paths and data compression	2003.08.21
PHYSICS_TEST_1_05	23	329	398	L3DagErrorFilter, compression, L2 changes	2003.08.07
PHYSICS TEST 1_05	20	325	397	same as v6 but with compression and raw banks dropped	2003.08.01

Select None Cancel

Coupled Trigger Tables are used for real  
physics (colliding beams) running

You will often see PHYSICS\_TEST\_...  
tables that experts may request to run  
at the end of stores

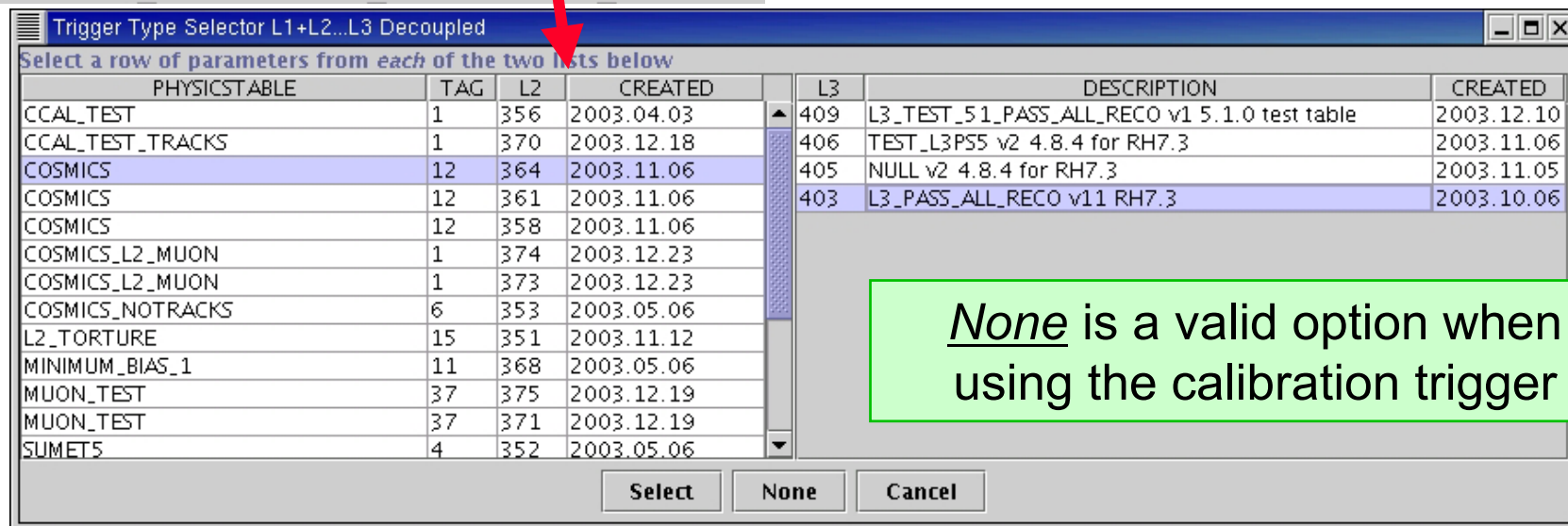
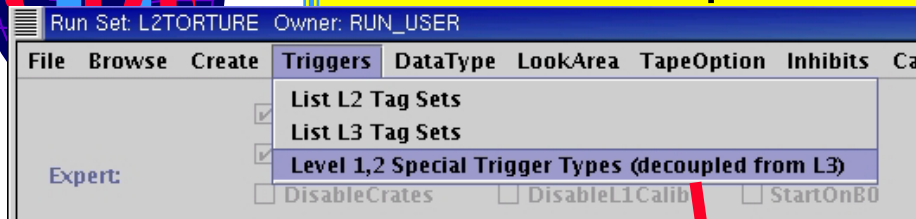


Guillermo sez:  
"Selecting a TriggerTable that  
does not crash Level 3 is the  
Ace's most important duty!"



# Decoupled Trigger Tables

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004



Lots of *decoupled* trigger table options, due to combinatorics of unspecified Level 3 paths

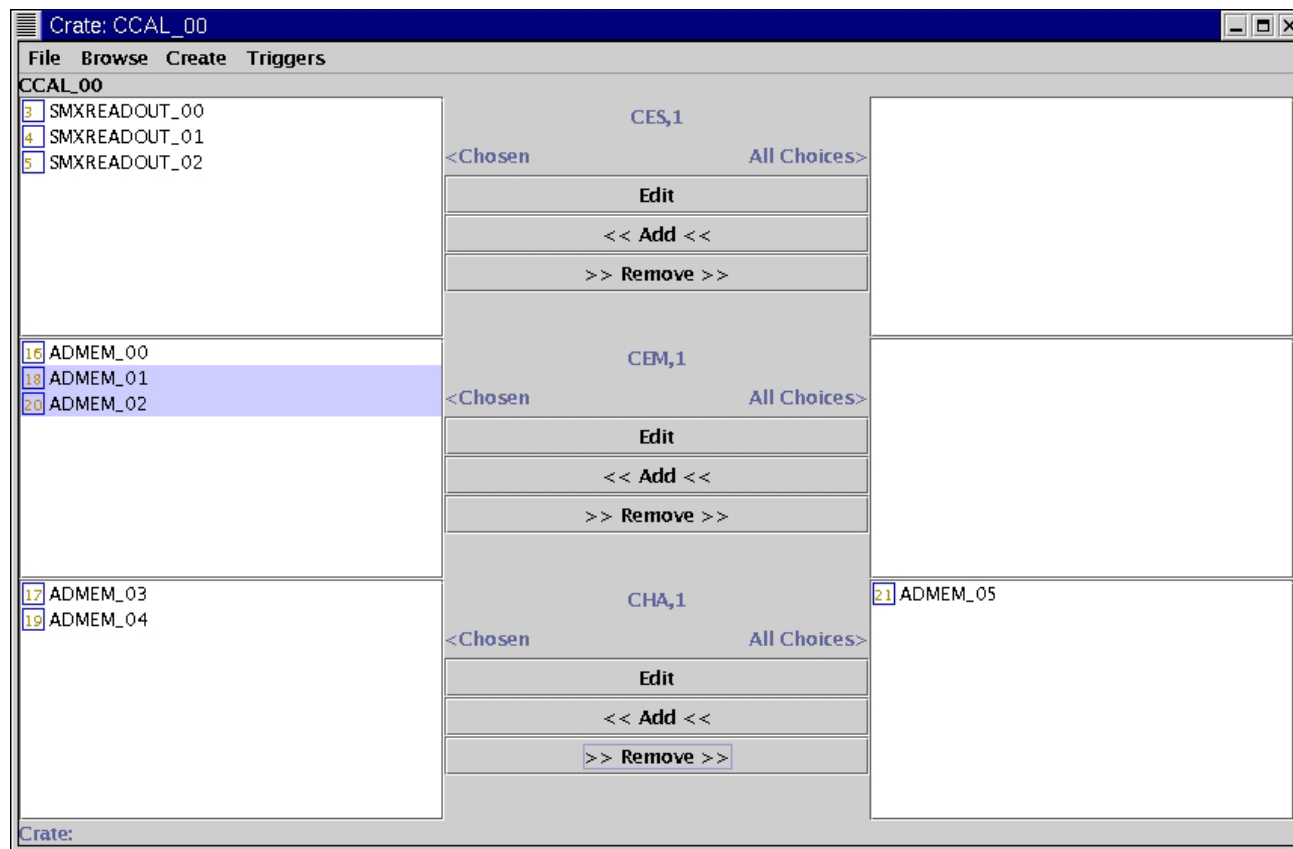
Greg Sez: "Selecting the correct Trigger Table that doesn't break Fred is the Ace's most important duty!" (plus bringing Greg Krispy Kreme doughnuts to make him fat)





# Crate Editor

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004



CrateEditor shows  
which cards will be  
read out, grouped  
by bank

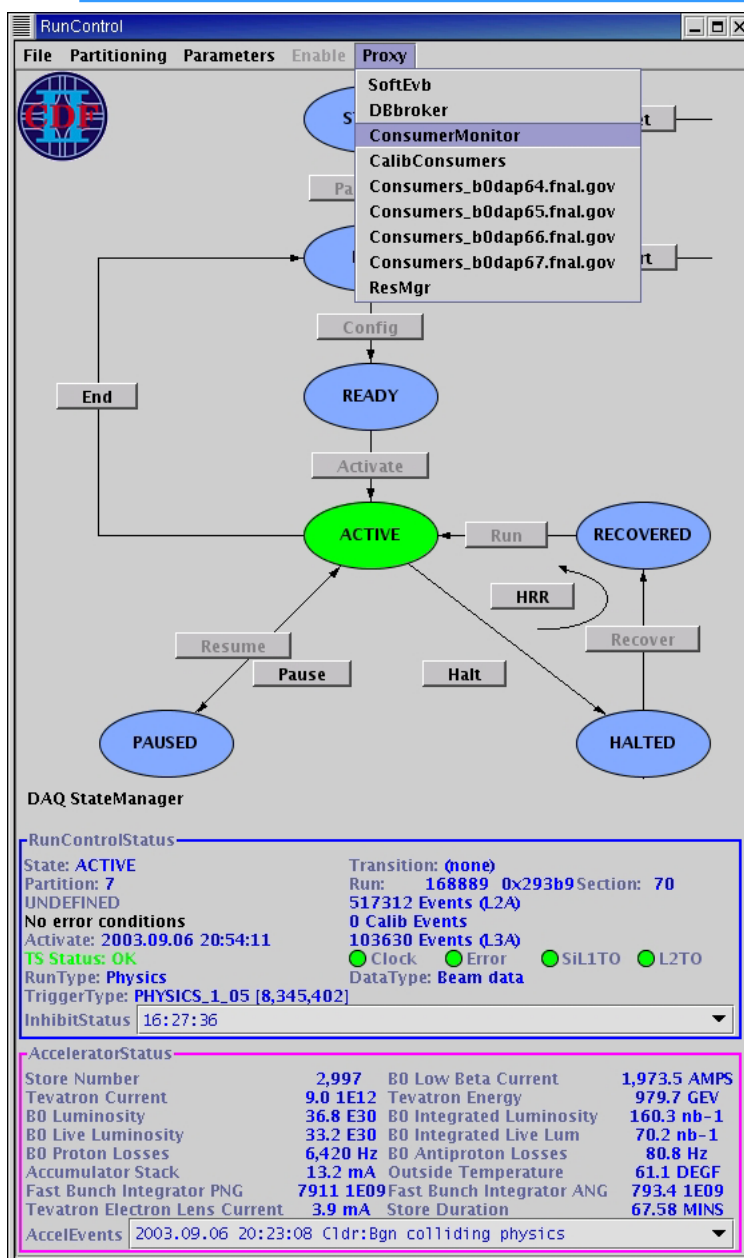
Cards can be  
removed from  
readout, but  
only in  
**emergencies**  
Notify expert  
*immediately* if  
you remove a  
card!

Component expert? Select card and press *Edit* for  
more info on the card  
Use caution when changed database connection



# Proxy Control Menu

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004



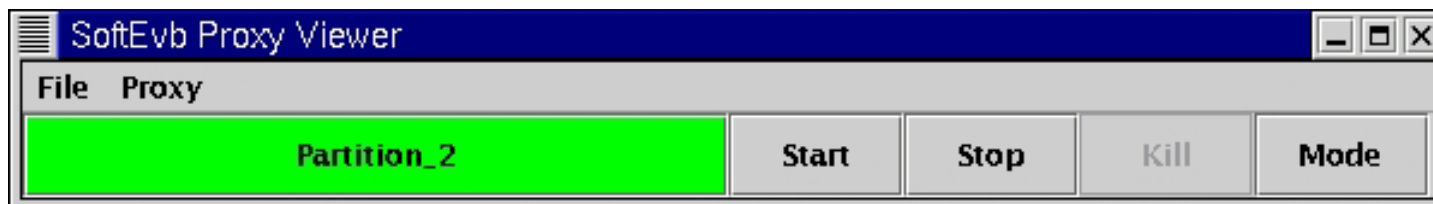
The Proxy gives you control over remote data acquisition processes:

- Software Event Builder
- Database Broker (for SVX)
- Consumer Monitor
- Calibration Consumers
- Resource Manager
- Physics Consumers (to be implemented)



# SoftEVB Proxy Viewer

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004



If you don't get responses from the Software Event Builder during transitions, then check the SoftEVB Proxy, and stop and/or restart if needed

Status colors:

- Green: Up and running
- Cyan: not running

Click on main button for detailed information



# CalibConsumer Proxy

W. Badgett  
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Run Configuration  
26-Mar-2004

A screenshot of a software window titled "CalibConsumers Proxy Viewer". The window has a menu bar with "File" and "Proxy". Below the menu bar is a table with 10 rows, each representing a different calibration consumer. The first column of the table lists the consumer names, and the next four columns contain buttons labeled "Start", "Stop", "Kill", and "Mode". The "CESCALIB\_0" row is highlighted in green, and its "Start" button is selected. The other rows have a cyan background.

File	Proxy	Start	Stop	Kill	Mode
QJE_0		Start	Stop	Kill	Mode
CESCALIB_0		Start	Stop	Kill	Mode
BSCQJE_0		Start	Stop	Kill	Mode
QJEMINIPLUG_0		Start	Stop	Kill	Mode
POTQJE_0		Start	Stop	Kill	Mode
COTCTT_0		Start	Stop	Kill	Mode
TOFQJE_0		Start	Stop	Kill	Mode
LED_0		Start	Stop	Kill	Mode
XEF_0		Start	Stop	Kill	Mode

Use the Calibration Consumer Proxy to see if your calibration consumer is still running



# Resource Manager Proxy

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

The image shows a screenshot of a software window titled "ResMgr Proxy Viewer". The window has a menu bar with "File" and "Proxy" options. Below the menu bar is a table with 11 rows and 5 columns. The columns are labeled "File", "Start", "Stop", "Kill", and "Mode". The rows represent different system components, each with a colored background: ResMgr\_Prd (green), ResMgr\_Int (cyan), ResMgr\_Dev (cyan), DBMon\_Prd (green), DBMon\_Int (cyan), DBMon\_Dev (cyan), DBMon\_OffPrd (cyan), HMon\_Prd (green), HMon\_Int (cyan), HMon\_Dev (cyan), and SVX\_BootLoader (green). Each row contains the component name in the "File" column and the "Start", "Stop", "Kill", and "Mode" labels in the respective columns.

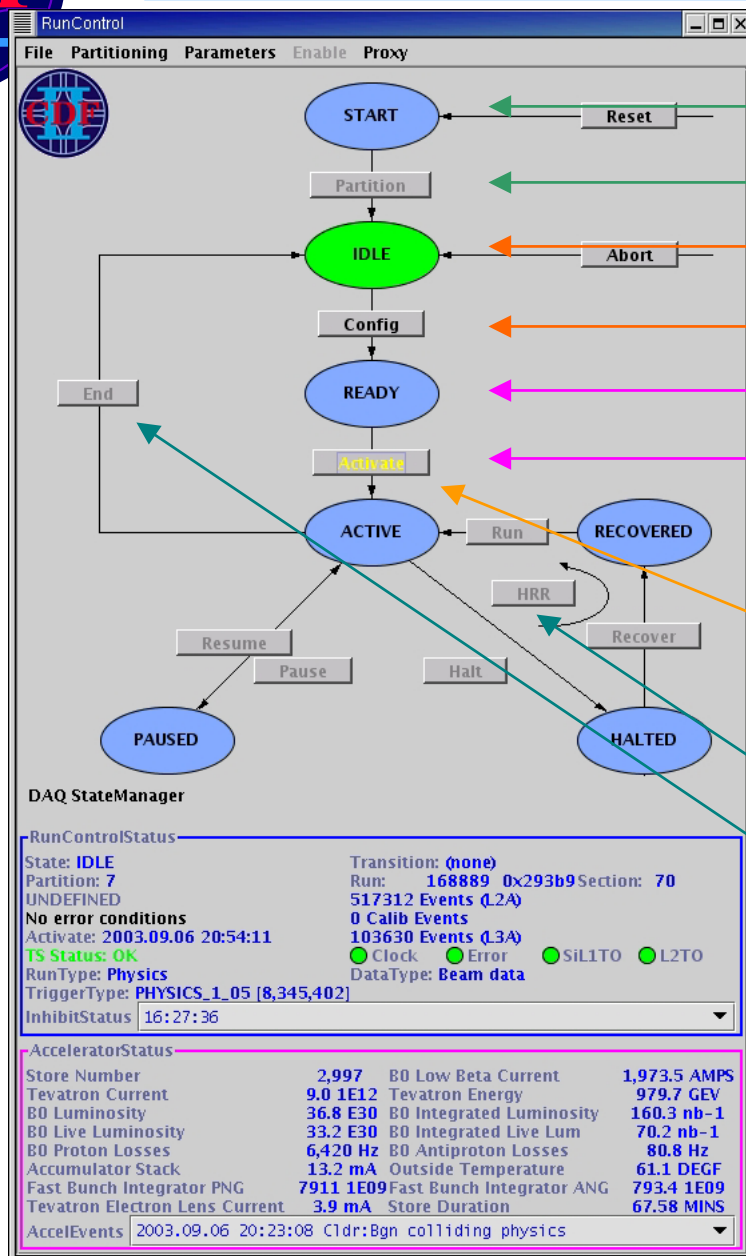
File	Start	Stop	Kill	Mode
ResMgr_Prd	Start	Stop	Kill	Mode
ResMgr_Int	Start	Stop	Kill	Mode
ResMgr_Dev	Start	Stop	Kill	Mode
DBMon_Prd	Start	Stop	Kill	Mode
DBMon_Int	Start	Stop	Kill	Mode
DBMon_Dev	Start	Stop	Kill	Mode
DBMon_OffPrd	Start	Stop	Kill	Mode
HMon_Prd	Start	Stop	Kill	Mode
HMon_Int	Start	Stop	Kill	Mode
HMon_Dev	Start	Stop	Kill	Mode
SVX_BootLoader	Start	Stop	Kill	Mode

Having a problem with Sticky Partitions?  
Try restarting the ResMgr\_Prd  
You can't hurt anything!



# Transition Sequencing

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26-Mar-2004



At *Start* state, select all desired clients and *Partition*

At *Idle* state, configuration must be fixed, then *Config*

At *Ready* state just about prepared to take data, then *Activate*

Note use of *click-ahead* (shift key plus mouse click) so that *Activate* will automagically engage when it becomes available

To fix problems, try ***Halt Recover Run***  
When *Active* and ready to finish run,  
***End***

*Abort* and *Reset* always available  
to get you out of sticky situations  
***Use sparingly!***





# Transitions

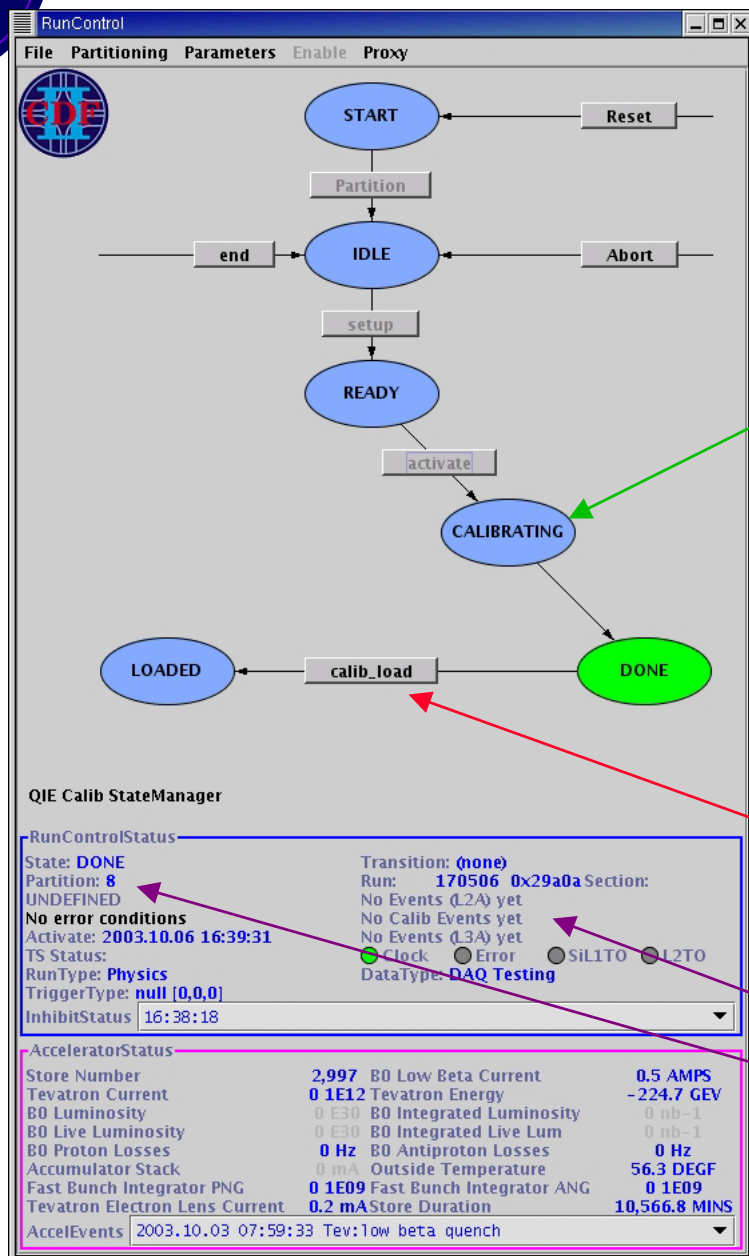
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Run Configuration  
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- **Partition**: Select front end crates and clients for the run; configure trigger and return crosspoints
- **Config/Setup**: Configure crates and clients with info that could change run by run, without adding or subtracting RC clients (slowest transition)
- **Activate**: Final step to enable system to take data (fast)
- **End**: Normal end of run, produces end of run summaries
- **Abort**: Return to Idle when no other option available
- **Pause/Resume**: Briefly stop data taking (HV trips, flying wires, inhibits)
- **Halt/Recover/Run**: Fast system error recovery, first option to use when an error occurs during data taking
- **Reset**: Return to Start state from Idle, or when no other options are available



# Calibration State Managers

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26-Mar-2004



## QIE Calibration State Manager

*Calibrating*: Transitory “fall-through” state, will drop to Done when all front end crates are complete

*Know where Calibration Consumer log files are kept:*  
**~cdfdaq/consumers/log**

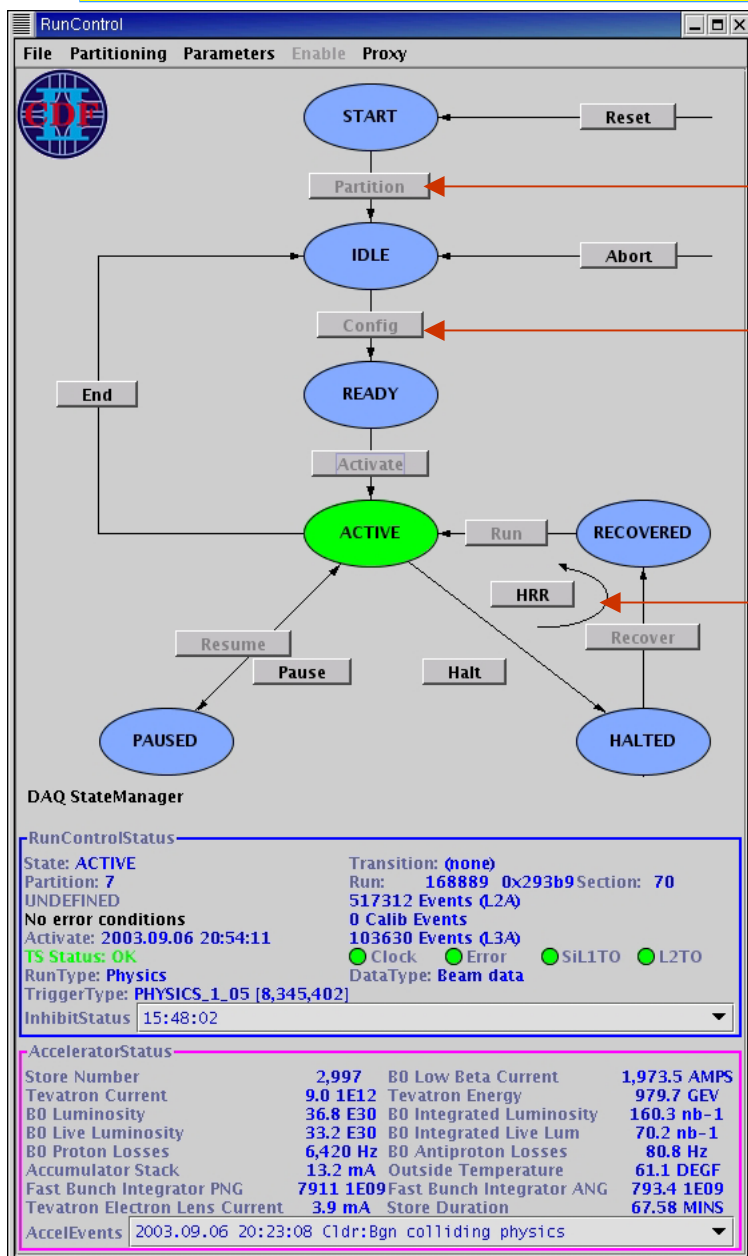
*CalibLoad* special option to do full download of AdMem FRAMs, by expert request only

QIE Calibration may be done in software partition, no hardware triggers are generated



# RunControl in action

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Run Configuration  
26-Mar-2004



**Partition:** choose front end crates and other virtual clients to participate in the run

**Config:** configure hardware and software for desired run type

**HaltRecoverRun:** quickly reset the entire DAQ and trigger system for fast recovery, minimize dead time; Normally use express HRR button

## StateManager

- User initiates *transitions* between different *states*
- Goal is to stay in the *Active* state until run is complete, taking recovery actions as necessary



# Sample Transition Errors

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

```
*** Run Configuration Invalid ***  
File  
Strange (but not necessarily fatal) Run Configuration  
CSL Host b0dau32, not the suggested b0dap60  
for RunType QIE Calibration  
DataType is Beam data [1], but Calibration Run [3] ex  
Crate CCAL_00 missing from run  
Crate CCAL_01 missing from run  
Crate CCAL_02 missing from run  
Crate CCAL_03 missing from run  
Crate CCAL_04 missing from run  
Crate CCAL_05 missing from run  
Crate CCAL_06 missing from run  
Crate CCAL_07 missing from run  
Crate CCAL_08 missing from run  
Crate CCAL_09 missing from run  
Crate CCAL_10 missing from run  
Crate CCAL_11 missing from run  
Crate CCAL_12 missing from run  
Crate CCAL_13 missing from run  
Crate CCAL_14 missing from run  
Crate CCAL_15 missing from run  
Crate CLC_00 missing from run  
Crate CLC_01 missing from run  
Crate CMP_00 missing from run  
Crate CMU_00 missing from run  
Crate CMU_01 missing from run  
Crate COT_00 missing from run  
Crate COT_01 missing from run
```

During your Run Control session, you will sometimes see warning messages pop up. This example tells you are missing some important crates during a beam physics run

Do **NOT** ignore  
any of these  
messages!!!

If you do not understand a message, contact the appropriate expert immediately



## Reply & Acknowledgments Window

Partition 2:	
b0tsi00	b0puls01
b0tsi02	b0tsi01
errlog	csl
slow	sevb

Window should  
always be visible

Words too small to read?  
Stretch the window!

This window indicates the transition status of clients:

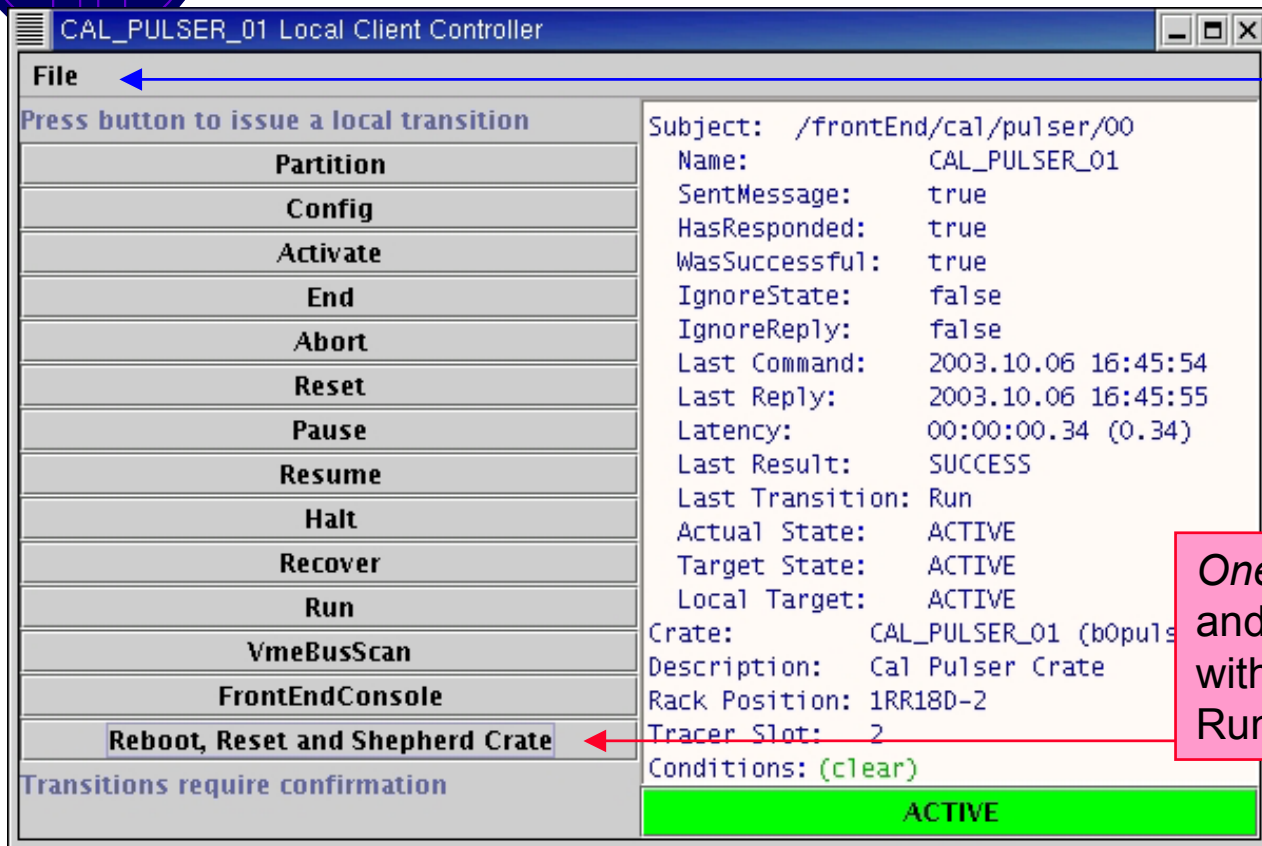
- **Butter yellow:** RC has *not* sent transition yet
- **Margarine yellow:** RC has sent transition, *waiting* for acknowledgment
- **Green** Client sent successful acknowledgment
- **Red** Client reported an error during transition – check error log

Click on the client button for more info and the client's  
*Local Controller*



# Local Client Controller

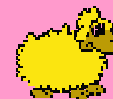
W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004



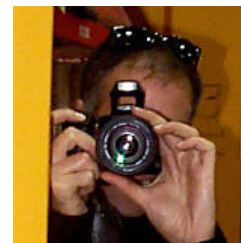
File menu gives you access to the contents of the configuration messages sent to the client

You can send single transitions to a single crate by hand here

*One-Touch* shepherding: reset and bring crate back into line with other Run Control clients



Allows you to **shepherd** individual clients through the transitions  
Can be used if one client out of many fails a transition  
Be careful to retain the same configuration!!



Avi sez: "We need a mouse-click database!"



# VmeBusScan Button

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

```
b0wcal00 VmeBusScan
File
VmeBusScan message
PartitionId:      2
IpAddress:        131.225.237.108
Ethernet:         08:00:3e:27:c0:ad
SystemNumber:
Slot: 2  Id: 0097 001 TRACER_V2.1A
Slot: 5  Id: 0237 003 ADMEM_V4.0      470
Slot: 6  Id: 0366 003 ADMEM_V4.0      460
Slot: 7  Id: 0179 003 ADMEM_V4.0      470
Slot: 8  Id: 0087 003 ADMEM_V4.0      470
Slot: 9  Id: 0364 003 ADMEM_V4.0      460
Slot: 10 Id: 0202 003 ADMEM_V4.0      460
Slot: 16 Id: 0207 003 ADMEM_V4.0      470
Slot: 17 Id: 0090 003 ADMEM_V4.0      470
Slot: 18 Id: 0111 003 ADMEM_V4.0      470
Slot: 19 Id: 0165 003 ADMEM_V4.0      470
Slot: 20 Id: 0128 003 ADMEM_V4.0      470
Slot: 21 Id: 0121 003 ADMEM_V4.0      470
```

Choosing VmeBusScan  
from the Local Controller  
window returns a scan of all  
cards in the front end crate

Useful for verifying the  
presence and basic  
functionality of readout  
cards



# FrontEnd Crates Control I/O

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Run Control &  
Run Configuration  
26-Mar-2004

## Ethernet port:

- vxlogin
- RunControl transitions

TCP/IP 100 Mb/s

## Serial port:

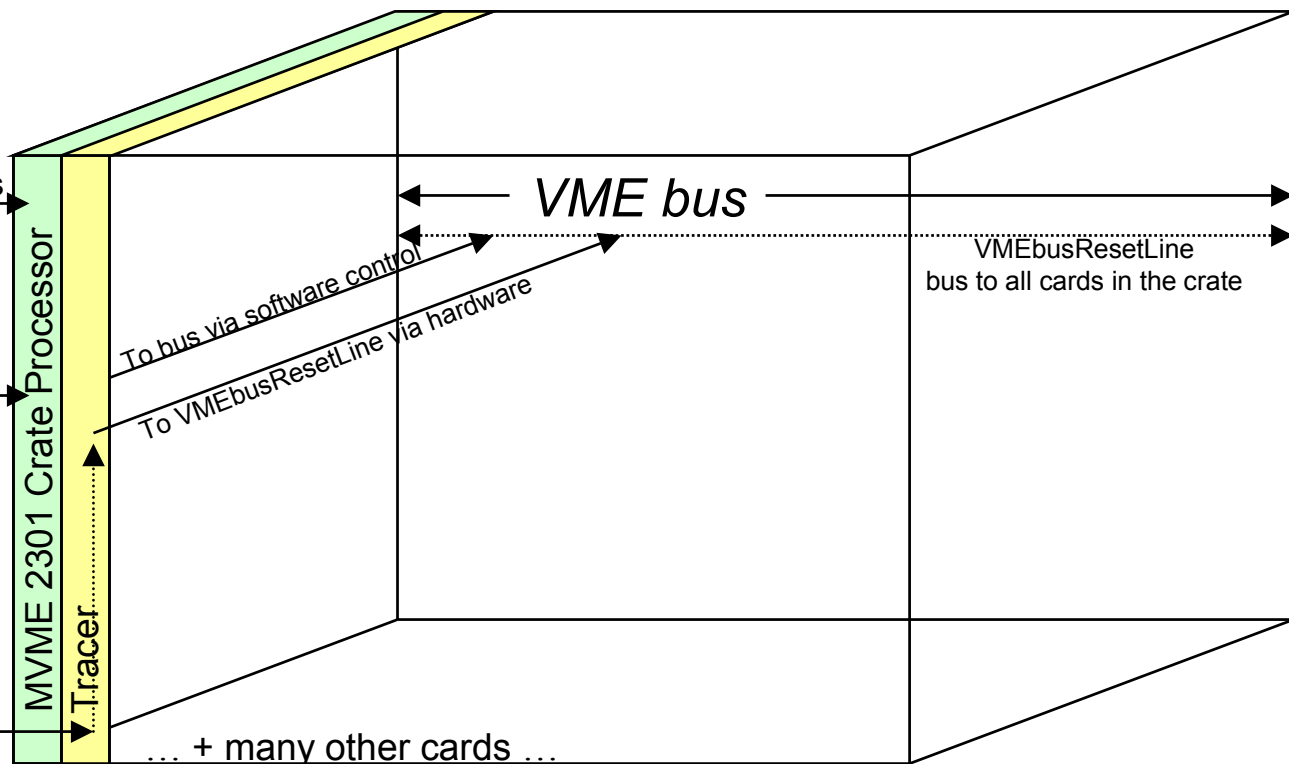
- minicom on *b0dap10*
- FrontEndConsole from RunControl local controller

serial 9600 baud

## Reset line:

unidirectional pulse

- reset\_crate
- Reboot, Reset, Shepherd... from RunControl local controller
- originates at *b0res00* crate



*From three into many...*





## The Five Fold Reset Path

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<u>Command</u>	<u>CPU Reset</u>	<u>VME Crate Reset</u>
<b>Reboot, Reset and Recover Crate</b> From the RunControl LocalClientController; uses reset line and software (VISIONdemo)	yes	yes
<b>reset_crate</b> After <i>setup fer</i> from unix shell; proceeds via reset line to tracer and then on to VME bus	yes	yes
<b>VISIONdemo, 9, 10</b> After <i>setup fer</i> from unix shell, or after logging into crate with vxlogin or minicom; proceeds via software on to the VME bus; TDCs may prefer this	yes	yes
<b>vxboot</b> After <i>setup fer</i> from unix shell; logs into crate processor and reboots via software	yes	no
<b>reboot</b> After logging into crate with vxlogin or minicom, equivalent to vxboot	yes	no



## CPU vs. Crate Reset

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26-Mar-2004

- CPU Reset
  - Clears up any software problems or heap corruption
  - Nicer to SmartSockets rtserver
  - Does not touch any other card in the crate
- VME Bus Crate-wide Reset
  - Also reboots CPU
  - Resets all cards in the crate via the VME bus reset line
  - Often needed by readout cards, e.g. TDCs are a popular candidate to benefit from VME bus reset
  - May leave dangling connection to SmartSockets rtserver
- For persistent hardware problems, neither reset may be successful
  - Important to contact appropriate expert as soon as possible in this case



## LocalClientController Details

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CAL\_PULSER\_01 Local Client Controller

File

Press button to issue a local transition

Partition
Config
Activate
End
Abort
Reset
Pause
Resume
Halt
Recover
Run
VmeBusScan
FrontEndConsole
Reboot, Reset and Shepherd Crate

Transitions require confirmation

Subject: /frontEnd/cal/pulser/00

Name: CAL\_PULSER\_01

SentMessage: true

HasResponded: false

WasSuccessful: false

IgnoreState: false

IgnoreReply: false

Last Command: 2003.10.06 16:44:06

Last Reply: 2003.10.06 16:43:52

Latency: 00:00:16.15 (16.15)

Last Result: SUCCESS

Last Transition: HRR

Actual State: ACTIVE

Target State: HALTED

Local Target: HALTED

Crate: CAL\_PULSER\_01 (b0pu1s01)

Description: Cal Pulser Crate

Rack Position: 1RR18D-2

Tracer Slot: 2

Conditions: (clear)

ACTIVE

Last transition command  
time, from main  
RunControl or this  
individual controller

Last known state as issued  
from client, with time

Target state to match the  
global expected state  
from main RunControl

Local target state to  
match the last local  
transition issued from this  
individual controller

Presence of these buttons while *Active* indicates a VME  
crate which can be recovered in the middle of a run



# FrontEndConsole

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Run Configuration  
26-Mar-2004



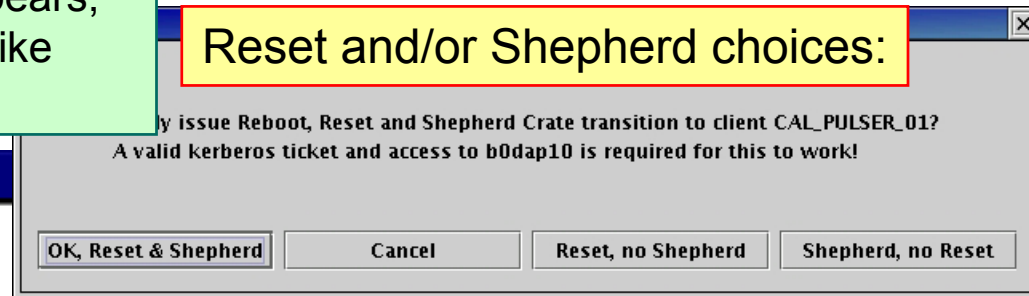
After a *Reboot*, *Reset* and *Recover Crate* command, a **FrontEndConsole** appears, showing the boot process, much like **minicom**

Reset and/or Shepherd choices:

```
FrontEndConsole b0cmu00
value = 0 = 0x0
#
#sp timeStamp,60
#
cd "~vxworks/boot/front-end"
value = 0 = 0x0
#
<startup.cdfvme
#
# startup script for cdfvme_common
#
#
ld < ${CDFVME_COMMON_DIR}/server/lib/${VXB
value = 15235760 = 0xe87ab0
#
# Do custom startup
#
< ${CUSTOM_STARTUP}

VISIONdemo
```

AutoScroll NoAutoScroll



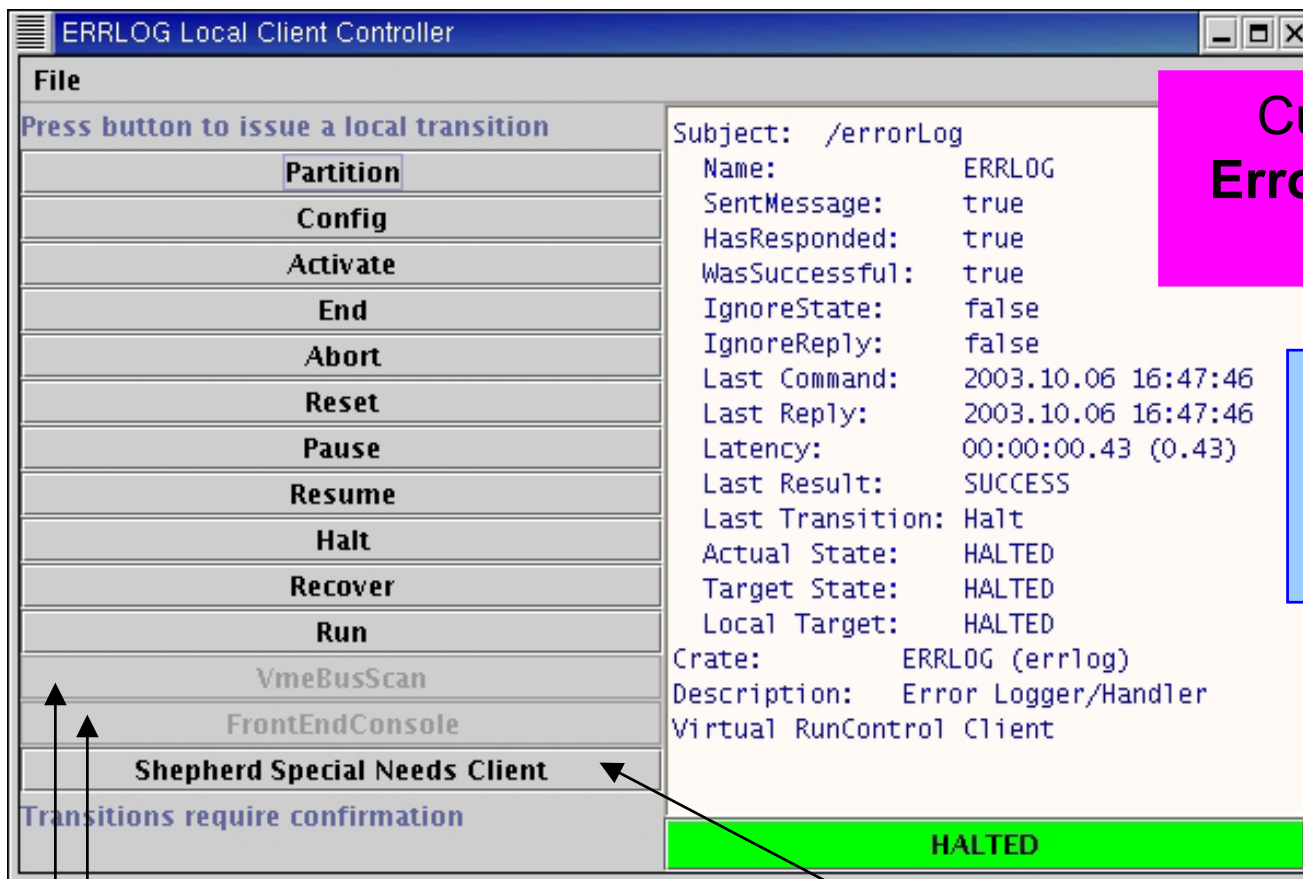
Don't forget to *kticket*  
A valid kerberos ticket is  
necessary for this feature to work

*FrontEndConsole* uses the hardware *serial* line connected to the crate processor, just like *minicom*; if serial line is broken, you won't see the crate booting, but the reset and recovery should still proceed via the *reset* line to the Tracer



## Special Needs Clients

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Currently only the  
**ErrorLogger** can use  
this feature

SlowControl may be  
another customer  
(in the future)  
others?

Disabled buttons indicate this is not a  
VME crate

*Special Needs* Virtual RunControl  
clients **must be restarted** per their  
special instructions before shepherding



# ClientMonitor

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After issuing Recover Special Needs Client, a special logging window *ClientMonitor* will appear in lieu of a *FrontEndConsole*

```
ClientMonitor errlog
2003.02.10 16:39:32 Recovering client ERRLOG ...
2003.02.10 16:39:34 Issuing RESET
2003.02.10 16:39:36 Trying Partition
2003.02.10 16:39:39 Successful transition Partition
2003.02.10 16:39:42 Trying ColdStart
2003.02.10 16:39:44 Successful transition ColdStart
2003.02.10 16:39:44 Trying Activate
2003.02.10 16:39:45 Successful transition Activate
2003.02.10 16:39:45 Trying Halt
2003.02.10 16:39:45 Successful transition Halt
2003.02.10 16:39:45 Successful transition Halt
2003.02.10 16:39:45 Successfully shepherded client ERRLOG
2003.02.10 16:39:45 Successfully shepherded crate ERRLOG
```

AutoScroll      NoAutoScroll

Close the FrontEndConsole and ClientMonitor windows when they are no longer needed

How a Special Needs *ClientMonitor* looks like after a successful shepherding into the *Halted* state



## Shepherding Status

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- Some clients and crates should never be recovered in the middle of a run
  - <http://www-cdfonline.fnal.gov/ace2help/runControl/shepherding.html>
  - L1, L2, L3, HEVB, SEVB, CLC, CSL, Scalers (b0tsi03)
  - Function will be disabled in *LocalClientController* window
- Some front-end crates have reset line or serial line broken
  - All crates in collision hall working (check this!)
  - JDL promises to fix remaining (upstairs) crates someday
  - As long as reset line or serial line works, shepherding will work
    - although you may see warnings
    - no crate has both reset and serial lines broken





# End of Run Status Box

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26-Mar-2004

Run Comments

File

Enter your name and pertinent Run informations, purpose and conditions

Test run only.  
No colliding beams during run; no need to process run on production farm

Run: 141700 Name: badgett State: TERMINATE Enter Close

Run Status ☐ Potentially Useful, send to offline farms ☒ Definitely Bad, do not send to farms

At the end of a run you will be presented with a comment box: enter any pertinent run informations

At the end of a beam physics run, you must also decide the basic run quality. When in doubt, choose *Potentially Good*  
*Determines whether run is processed offline!*



# Error Logger

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

The screenshot shows the 'Error Display' window with the title bar 'Error Display ( current version = v1\_09\_7 )'. The menu bar includes 'File', 'Log', 'Options', 'Tools', and 'Help'. Below the menu bar are buttons for 'Stop log file', 'Clear', and a status indicator 'AUTOMATIC HRRs enabled'. The main text area displays the following log entries:

```
ACTIVE DAQ cdfmun@b0dap73.fnal.gov 11:6:24 run #: 164844 (0x283e0)
Attention!!! SCPU_BAD_VRB_BYTE_COUNT Error !!!
Hardware EVB has detected a problem with data quality in
SCPU b0eb12.
Datataking is paused: events are not being processed.
- HRR should help.
[MLE]
(MLE) b0l3gate1.fnal.gov:main:11:08:43 AM->Host b0eb12.fnal.gov, task tRec_0
SCPU-P0-E-VrbHeader: Dump of header words for event 2078551 from VRB in slot 10:
0x000d2551 0x000d2551 0x00000000 0x00000000 0x00000000 0x00000000 0x1000
(MLE) b0dap73.fnal.gov:Start ErrorHandlerThread[Thread-4401,6,main]:11:06:10 AM->Re
(MLE) b0svx06.Messenger:11:08:45 AM->Silicon Timeout:BUSY- Slots: 08:fa00 10:fa20 12:
1 crate/s: b0svx02(112), busy.[RXPT]
(RC) 11:6:15 Halt -> HALTED
(RC) 11:6:22 Recover -> RECOVERED
(RC) 11:6:24 Run -> ACTIVE
```

Below the main text area are two tabs: 'Time sequence' and 'Argument sequence'. The 'Argument sequence' tab is selected, showing the following error details:

```
Code: 0x6090800000011 Mnemonic: FERML_REQUESTED_HRR_ISSUED
Node Name: b0dap73.fnal.gov; Node Id: 131.225.236.223
Process: Start ErrorHandlerThread[Thread-4401,6,main]; PID: -1; Time: 11:06:10
Code Line: 0; Routine: Unknown
Parameters: Requested Halt-Recover-Run issued [errmon]

Code: 0x43c0800000011 Mnemonic: FERML_VRB_TIMEOUT
Node Name: b0svx06; Node Id: 131.225.237.152
Process: Messenger; PID: 129521192; Time: 11:08:45 AM
Code Line: 911; Routine: FER_mess.c
Parameters: BUSY- Slots: 08:fa00 10:fa20 12:fa40 16:f800 18:f820 20:f840
```

At the bottom of the window, it says 'partition 0 Listening... (99 mer.mess.)'.

Error Logger receives and interprets status and error messages from front end crates and other clients

Status and Error Messages

Client errors on Run Control?  
Look here for more informations

Error Messages, with  
summary pane



ErrorLogger can send transition commands to Run Control when specific problems are encountered

Enable automatic HRR here,  
should normally be on

ErrorLogger can also initiate automatic shepherding for certain types of errors, currently only TDC GLOBAL NOT DONE

ErrorLogger sends **orange** and **red** warning windows to Run Control, often with special instructions on how to recover



# DaqMon

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

The screenshot shows the 'CDF DAQ Monitor' window. It features a left sidebar with expandable sections: 'Run Control status' (RC), 'VxWorks nodes' (VxWorks), 'Scalers' (Rates and Deadtime), 'Trigger Supervisor' (TS), 'Trigger Supervisor' (TS Rate), 'Return Crosspoints' (RXPT), 'Event Builder' (EVB), 'Level 3' (L3), 'Consumer-Server/Logger' (CSL), 'Message Logger' (Merlin), 'FE Monitor Configuration' (FEMon Config), 'CDF Crate Reset' (SYSRESET), and 'Online Database cdfonprd' (Database Status). The main area is titled 'Component Status' and lists various system components with their status: Event Builder Proxy, Level3 Proxy, Consumer Server/Logger, Resource Manager, Online Database cdfonprd, SlowControl Idle, Clock, Soft EVB (0-7), TSI+L1GL+L2DE, L1 Cal Trigger, L2 Cal Trigger, XFT+XTRP+MUTR, SVT, Central Cal, Plug Cal, Wall Cal, COT, Muons+HTDC, CLC+BSC+MP+RP, and SVX+ISL+L00.

Watching Run Control status is  
your first line of defense  
Plus, many monitoring tools are  
available

DaqMon is your gateway to  
many monitors:  
setup for  
daqmon  
And provides a quick glimpse status  
of all systems



# VxMon

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004



At-a-glance summary of all front end crates in the system

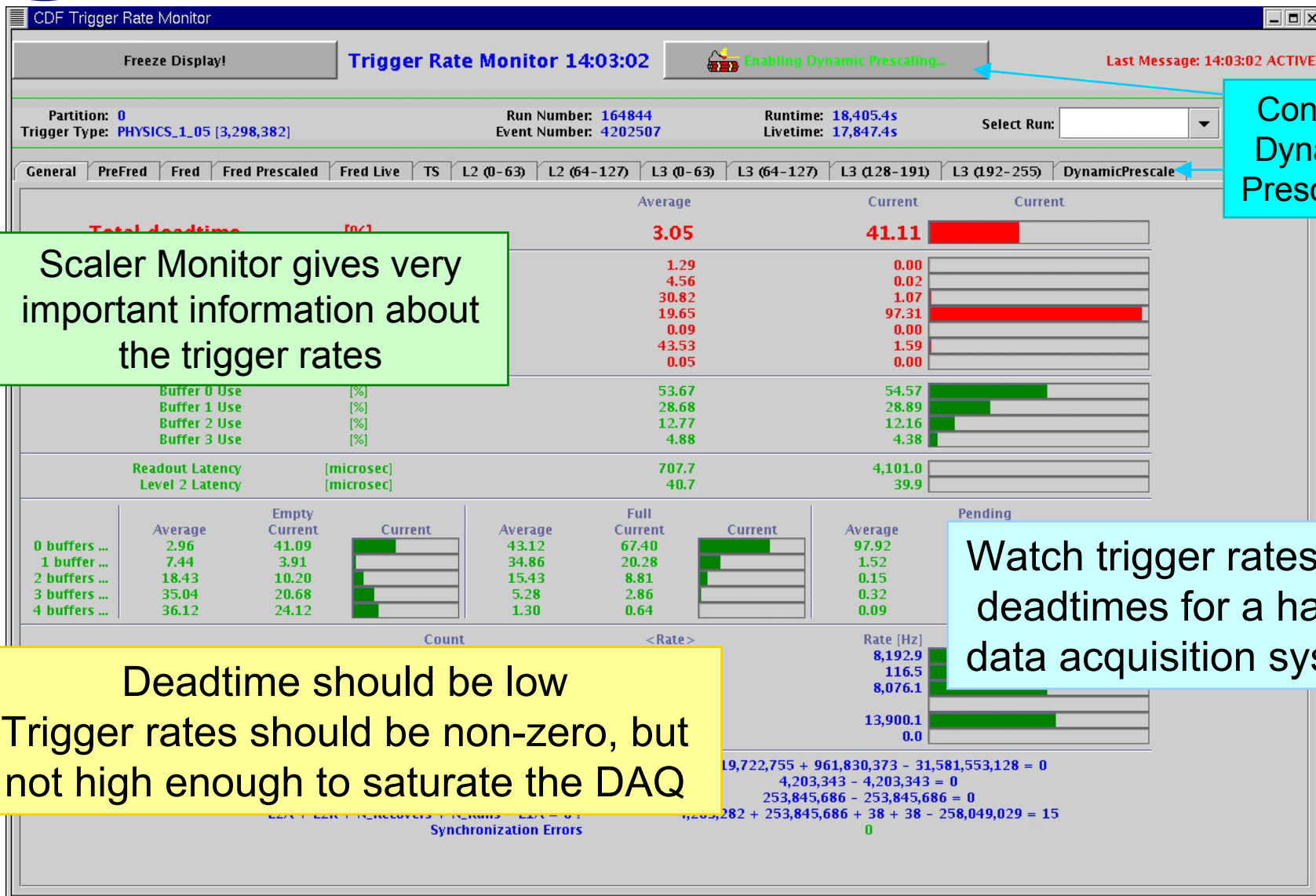
Arnd sez: "Monitoring the Front End crates is the Ace's most important job"





# ScalerMonitor

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Run Control &  
Run Configuration  
26-Mar-2004







# RunSummary Web Pages

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

## Run Summary Web Pages

Netscape: Run Configuration for run 160441

File Edit View Go Communicator Help

Location: [http://www-cdfonline.fnal.gov/cdfdb/servlet/RunSummary?RUN\\_NUMBER=160441](http://www-cdfonline.fnal.gov/cdfdb/servlet/RunSummary?RUN_NUMBER=160441)

What's Related

Run Information CDF Electronic Logbooks

Run Configuration for run 160441: [L1](#) | [L2](#) | [L3](#) | [ShiftLog](#) | [ErrorLog](#) | [SessionLog](#) | [StoreDown](#) | [SlowControl](#) | [Offline](#)

RUN	OUTPUT	PID	DAY	ACTIVE	END	MYLIBC	RUNTYPE	DATATYPE
160441 (0x27B9)	HardEvb	0	2003.03.20	19:00:09	04:11:28	0.0.0	Physics	Beam data

PHYSICSTABLE	L2TAG	L3TCL	READOUT_LATENCY	LEVEL2_LATENCY	FREDLIA	FREDLIA_HZ
PHYSICS_1_04 (4.235.357)	255	669	708.563 micro-sec	38.487 micro-sec	391.947.967	12.283

LIACCEPTS	LIA_HZ	NB_L1	L2ACCEPTS	L2A_HZ	NB_L2	L3ACCEPTS	L3A_HZ	NB_L3
381.792.484	11.886.2	706.792.96	4.437.858	138.2	8.215.58	1.429.503	44.5	2.646.37

CALIBLIA	USER_NODE	REFMTERR	RUNTIME	GFREDTIME	SYNCERRORS	N_HALTS
0	cdfrun@b0dnp73.fnal.gov	22 (0.00%)	08:55:20.7	08:51:50.0	0	48

LIVETIME	DEADTIMES	LIDONE	READOUT	L2DEAD	L2_OR_RO	TSDEAD	INHIBIT	WAITBUSY
08:42:29.1	00:12:51.5 = 2.40% =>	1.17%	29.91%	23.80%	12.95%	0.80%	27.31%	4.07%

TEVSTORE	TEVENRGY	LUMI_BEGIN	LUMI_END	LUMI_DELIV	LUMI_LIVE	DFC_LUMI_ONL	DFC_LUMI_OFF
2328	979.10 GeV	21.259 E30	14.006 E30	573.416 nb-1	540.176 nb-1	0.000 nb-1	0.000 nb-1

SVT_EXPERT	SVT_HW	SVT_MAP
null	20030320184914.hwset/2356660797	offline_100030_20030319115712.mapset/1740614991

P_BEGIN	P_END	PBAR_BEGIN	PBAR_END	PLOSS_BEGIN	PLOSS_END	PBARLOSS_BEGIN	PBARLOSS_END
6.177.6 E02	5.636.4 E02	699.3 E02	587.0 E02	3.175.5 Hz	2.505.8 Hz	346.4 Hz	196.3 Hz

GOOD	ANA	RC	CLC	L1	L2	L3	CAL	COT	CMU	CMP	CMX	IMU	SVX	ISL	L00	SVT	SMX	TOF	MNP	BSC
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

OFFL	OFF_STS	CLC	L1	L2	L3	CAL	COT	CMU	CMP	CMX	IMU	SVX	ISL	L00	SVT	SMX	TOF	MNP	BSC	
1	OFFL INF=>	null	null	null	null	null	null	null	null	null	null	null	null	null	null	null	null	null	null	null

Netscape: SlowControl

File Edit View Go Communicator Help

Location: <http://www-cdfonline.fnal.gov/cdfdb/servlet/SlowControl?DETECT=160441>

Run Information CDF Electronic Logbooks

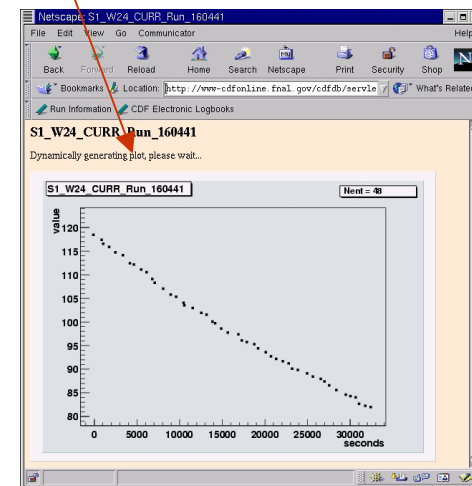
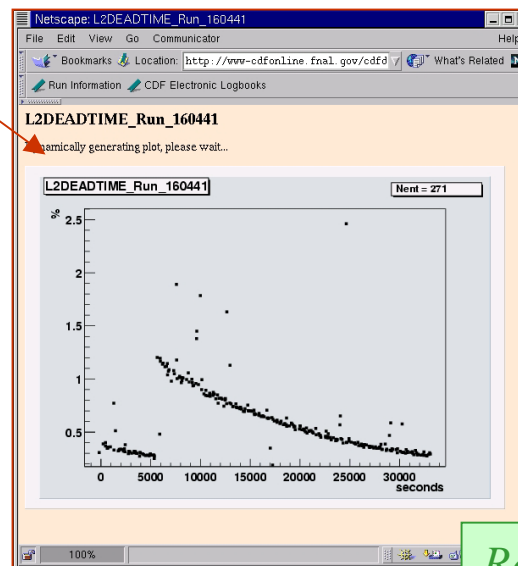
SlowControl

Fetching from database, please wait...

Data below represent 10 minute window around run time; plots show strict run time window

DETECTOR	RUN	BEGIN	END	NOW
SOLENOID	160441	2003.03.20:19:00:09	2003.03.21:04:11:28	2003.03.21:15:13:30

DET_ID	SUBDET	SENS_ID	TAG	DESCRIPTION	IFIX_AVERAGE	STDDEV	N
491	null	12576	S_HALL_PROBE	Hall probe 1 magnetic field	3.092.901	44.803	51
491	null	12577	S_MAG_FIELD	Magnetic field NMR measurement	1.379	0.000	51
491	null	14319	S_MAG_DCCT	Magnetic current	4.647.158	0.015	51
491	null	14320	S_NMR_LOCKED	NMR locked bit	1.000	0.000	51



Run summary pages are dynamically produced, with almost every quantity hyper-linked, with many of the links drawing plots of the quantity of interest

<http://www-cdfonline.fnal.gov/>

Follow [RunSum](#) and related links

Root used for plotting 46





## Useful Monitoring Shell Commands

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

First you “**setup fer**”, then from the terminal shell prompt, type:

- **rcd**
  - Starts up display of all RunControl states
  - Useful between stores when lots of experts around
  - Also launchable from RunControl File menu
  - Click on partition to get list of crates owned
- **resources**
  - Book a partition and crates without starting up RunControl
- **mapvme**
  - Map the VME bus of the specified crate controller
  - Fast, non-GUI text display
  - Argument is crate CPU, e.g. b0cot05
- **daq**
  - Bring up CDF VME card and crate control panels for specified crates
- **partition**
  - Display current status of all partitions to screen
  - Fast, non-GUI text display
  - Optional argument for specific partition will print booked resources



# Conclusion

W. Badgett  
Run Control &  
Run Configuration  
26-Mar-2004

- DAQ Ace's main responsibility is operation of Run Control
- Before your shift, come to CDF control room and try out Run Control features, learn from experienced Aces and other DAQ experts
- Don't understand a feature or warning? Don't ignore! Find out! Page experts if necessary!
- Questions, comments, suggestions, complaints, send e-mail:  
[cdf-rc-support@fnal.gov](mailto:cdf-rc-support@fnal.gov)
- Urgent problems, page DAQ/RC at 722-7579